UNITED STATES PATENT AND TRADEMARK OFFICE

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10/532,099	04/21/2005	Moshe Ben-Chorin	P-5490-US	4040

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EXAMINER
AMIN, JWALANT B

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/532,099	BEN-CHORIN ET AL.
Office Action Summary	Examiner	Art Unit
	JWALANT AMIN	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 February 2008*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-6,8-31 and 33-43* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-6,8-31 and 33-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/28/2008*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 2/19/2008 have been fully considered but they are

not persuasive.

2.   Regarding claims 42 and 43, the applicant argues that the combination of

Taniguchi and Chen do not teach "...receiving input pixel color data including at least

first and second intensity values for first and second primary color components,

respectively; determining at least a chromaticity correction for said first primary color

component based at least in part on said second primary color component of said input

color data; and adjusting the intensity value of said first primary color component of said

input pixel color data by combining said first primary color component of said input pixel

color data and said chromaticity correction for said first primary color component". The

applicant further argues "... Chen does not provide corrected chromaticity of a primary

color" (see pgs. 10-12 of applicant's remarks)

3.   However, the examiner interprets that Taniguchi in view of Chen teach these

limitations. Taniguchi teaches a method of selectively adjusting chromaticity of a color

(R, G and B display signals) displayed by a color display (color monitor), the method

comprising receiving input pixel color data including at least first and second intensity

values for the first and second primary color components, respectively (pixels are

inherent to a color image displayed on a color monitor; the intensity of red, green or blue

primary color are received by the monitor); adjusting an intensity value of said first

primary color component of said input pixel color data (the intensity of red primary color

is adjusted using the intensity values of green and blue primaries) (col. 7 lines 41- 67,

equation 1, col. 8 lines 16-62). Taniguchi further teaches adjusting comprises

calculating an adjusted intensity value (r', g', b' are the adjusted intensities values of the

primary colors red, green and blue) for said primary color component using a

conversion operator (inverse matrix) (col. 7 lines 64-67, col. 8 lines 1-8, col. 13 lines 41-

46).

Although Taniguchi teaches the limitations as stated above, Taniguchi does not

explicitly disclose determining at least a chromaticity correction for said first primary

color component based at least in part on said second primary color component of said

input color data, and adjusting the intensity value of said first primary color component

of said input pixel color data by combining said first primary color component of said

input pixel color data and said chromaticity correction for said first primary color

component. However, Chen teaches exactly the same (figs. 9-11, col. 6 lines 5-23 and

lines 45-53, col. 9 lines 59-67, col. 10 lines 1-67; corrected color levels for gray

correspond to correcting chromaticity of the color components of gray; determining color

components (red and blue) as functions of a first color component (green) in the color

space by minimizing the difference between the color produced on a device by the color

components and a target white point corresponds to determining chromaticity correction

for said first primary color component based at least in part on said second primary

color component of said input color data; it should be noted that the chromaticity

property data of the display is used to generate the correction function for the other

color components; combining the color components as functions of the first color

component and the first correction function to generate correction functions for other

color components corresponds to adjusting the intensity value of said first primary color

component by combining said first primary color component and said chromaticity

correction for said first primary color component). Therefore, it would have been obvious

to one of ordinary skill in art at the time of present invention generate correction

functions for the other color components as taught by Chen and apply it into the method

of Taniguchi because the correction functions derived in this manner corrects gamma to

maintain a substantially consistent white point over a plurality of gray levels from a white

to a black (col. 6 lines 16-23).

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

5.   Claims 8-11 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

6.   Claim 8 recites the limitation "said conversion operator" in lines 1-2. There is

insufficient antecedent basis for this limitation in the claim. It should be noted that claim

8 is dependent on claim 42, which does not include above limitation. However, for the

purpose of prior art rejection, the above limitation will be considered.

7.   Claims 9-11 are dependent on claim 8, and therefore the examiner states the

same reasons as above.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

9.   Claims 2-3, 6, 8-13, 15-16, 18-24, 26-31, 34-36 and 38-43 are rejected under 35

U.S.C. 103(a) as being unpatentable over Taniguchi et al. (US 6366291; hereinafter

Taniguchi), and further in view of Chen et al (US 6844881; hereinafter Chen).

10.   Regarding claims 42 and 43, Taniguchi teaches a method of selectively adjusting

chromaticity of a color (R, G and B display signals) displayed by a color display (color

monitor), the method comprising receiving input pixel color data including at least first

and second intensity values for the first and second primary color components,

respectively (pixels are inherent to a color image displayed on a color monitor; the

intensity of red, green or blue primary color are received by the monitor); adjusting an

intensity value of said first primary color component of said input pixel color data (the

intensity of red primary color is adjusted using the intensity values of green and blue

primaries) (col. 7 lines 41- 67, equation 1, col. 8 lines 16-62). Taniguchi further teaches

adjusting comprises calculating an adjusted intensity value (r', g', b' are the adjusted

intensities values of the primary colors red, green and blue) for said primary color

component using a conversion operator (inverse matrix) (col. 7 lines 64-67, col. 8 lines

1-8, col. 13 lines 41-46).

Although Taniguchi teaches the limitations as stated above, Taniguchi does not explicitly disclose determining at least a chromaticity correction for said first primary color component based at least in part on said second primary color component of said input color data, and adjusting the intensity value of said first primary color component of said input pixel color data by combining said first primary color component of said input pixel color data and said chromaticity correction for said first primary color component. However, Chen teaches exactly the same (figs. 9-11, col. 6 lines 5-23 and lines 45-53, col. 9 lines 59-67, col. 10 lines 1-67; corrected color levels for gray correspond to correcting chromaticity of the color components of gray; determining color components (red and blue) as functions of a first color component (green) in the color space by minimizing the difference between the color produced on a device by the color components and a target white point corresponds to determining chromaticity correction for said first primary color component based at least in part on said second primary color component of said input color data; it should be noted that the chromaticity property data of the display is used to generate the correction function for the other color components; combining the color components as functions of the first color component and the first correction function to generate correction functions for other color components corresponds to adjusting the intensity value of said first primary color component by combining said first primary color component and said chromaticity correction for said first primary color component). Therefore, it would have been obvious to one of ordinary skill in art at the time of present invention generate correction functions for the other color components as taught by Chen and apply it into the method

of Taniguchi because the correction functions derived in this manner corrects gamma to maintain a substantially consistent white point over a plurality of gray levels from a white to a black (col. 6 lines 16-23).

11.   Regarding claim 2, Taniguchi teaches pixel comprising three or more primary color components (RGB color signals; col. 7 lines 41-44).

12.   Regarding claim 3, Taniguchi teaches that said pixel comprises three primary color components (RGB color signals; col. 7 lines 41-44) and wherein said adjusting comprises adjusting the intensity value of said primary color component based on intensity values of all said three primary color components (the intensity value of red is adjusted based on the intensity values of all three primaries red, green and blue; equation 1, col. 8).

13.   Regarding claim 6, Taniguchi teaches performing said adjusting (reproducing) for a plurality of pixels of a color image (pixels are inherent to color patches) to be displayed by said color display (color monitor) (col. 9 lines 52-55).

14.   Regarding claim 8, Taniguchi teaches said conversion operator comprises a conversion inverse matrix (inverse matrix) to convert the intensity values of said primary color components in an absolute data format (the values displayed by the 3x3 matrix in equation 1 represents the intensity values of primary color components in an absolute data format) into corresponding values in a device-dependent data format (XYZ) (equation 1, col. 8 lines 4-8, col. 13 lines 41-46).

15.   Regarding claim 9, Taniguchi teaches one or more elements of said conversion inverse matrix are dependent on one or more of the intensity values of said primary

color components (equation 1; r' is dependent on the intensity values of primary colors

red, green and blue) (equation 1, col. 8 lines 4-8, col. 13 lines 41-46).

16.   Regarding claim 10, Taniguchi teaches conversion inverse matrix corresponds to

an inverse of a direct conversion matrix (matrix expressed by equation 8) (col. 1 lines 4-

8, col. 13 lines 19-46).

17.   Regarding claim 11, Taniguchi teaches said direct conversion matrix comprises

elements (values of the 3x3 matrix of equation 8) dependent on the intensity values of

said primary color components (values of the 3x3 matrix in equation 8 correspond to

red, green and blue primary in the color monitor) (col. 13 lines 19-40).

18.   Regarding claim 12, Taniguchi teaches determining an initial conversion operator

(determining the ratio of maximum luminances of red, green and blue in actual color

monitor when the white of D50 is used as white corresponds to initial conversion

operator; equation 3 col. 13; matrix of equation 8); and converting the intensity values of

said primary color components (red, green and blue represented by values r', g' and b'

in the actual color monitor) into initial converted intensity values (intensity values of

XYZ) using said initial conversion operator (matrix of equation 8) (col. 13 lines 3-35)..

19.   Regarding claim 13, Taniguchi teaches determining said initial conversion

operator comprises selecting one or more initial intensity values (the matrix is obtained

for white of D50, and thus if a white for another color temperature is used then it would

select different intensity values of red, green and blue of the actual color monitor) (col.

13 lines 3-18).

20.   Regarding claim 15, Taniguchi teaches adjusting said conversion operator (the matrix of XYZ values in actual color monitor is adjusted to the virtual color space represented by x, y and Y values of the colors red, green and blue) based on said converted values (values L^*, a^* and b^* in the uniform color space are the corresponding values or red, green and blue in the actual color monitor) to provide an adjusted conversion operator (matrix of equation 9 is the adjusted conversion operator); and converting the intensity values of said primary components (r'g'b' represent the primary components in virtual color space) using said adjusted conversion to provide adjusted converted intensity values (XYZ values in equation 9 represent the adjusted converted intensity values in a virtual color space) (col. 13, col. 14).

21.   Regarding claim 16, Taniguchi teaches adjusting comprises calculating elements (XYZ values in equation 9) of an adjusted direct conversion matrix based on said converted values (values represented by the 3x3 matrix in equation 9 represents adjusted direct conversion matrix based on converted values L^*, a^* and b^* corresponding to x, y and Y values with respect to the colors expressed by the red, green and blue in virtual color space); and constructing an inverse matrix (inverse matrix represented by equation 10) by inverting said adjusted direct conversion matrix (matrix represented by equation 9) (col. 14 lines 28-50).

22.   Regarding claim 22, Taniguchi teaches said adjusting comprises obtaining one or more device-dependent intensity values (XYZ values in equation 9) corresponding to one or more imaginary (virtual) intensity values (r'g'b' of equation 9 representing values in virtual color monitor) of said primary color components (r'g'b' corresponds to red,

green and blue); and combining one or more of said device dependent intensity values
(equation 4-7 uses combination of device dependent intensity values XYZ) (col. 13
equations 4-7, col. 14 lines 34-50).

23.   Regarding claim 23, Taniguchi teaches said imaginary intensity values (r'g'b' in
equation 9) comprise the intensity values of said primary color components (r'g'b'
represent intensity values of primary colors red, green and blue in virtual color space)
(col. 14 lines 41-50).

24.   Regarding claims 24, Taniguchi teaches obtaining said imaginary intensity values
(r'g'b' in equation 10) by applying a predefined conversion operator (3x3 matrix of
equation 10) to input intensity values (values in 3x3 matrix corresponding to red, green
and blue) of said primary color components (equation 10, col. 14).

25.   Regarding claim 26, Taniguchi teaches each of said device dependent values
(XYZ) correspond to one of said primary color components (r'g'b') (equation 9, col. 14;
in equation 9, the value X corresponds to all three values r', g' and b').

26.   Regarding claim 27, Taniguchi teaches said combining comprises combining
said device-dependent values based on said primary color components (equation 9, col.
14; in equation 9, the value X corresponds to the combination of all three values r', g'
and b').

27.   Regarding claim 28, Taniguchi teaches combining comprises calculating a sum
of the device dependent values corresponding to each of said primary color
components (equation 9, col. 14).

28.   Regarding claim 29, Taniguchi teaches adding (equation 10) a sub-adjustment value (individual elements representing the intensity values of the 3x3 matrix in equation 10) to a first imaginary intensity value (r') based on a second imaginary intensity value (g'), said first and second imaginary intensity values corresponding to said first and second primary color components (r' corresponds to red and g' corresponds to green primary colors), respectively (equation 10, col. 14).

29.   Regarding claim 30, the statements presented above, with respect to claims 29 and 23, are incorporated herein.

30.   Regarding claim 31, the statements presented above, with respect to claims 29 and 24, are incorporated herein.

31.   Regarding claim 34, the statements presented above, with respect to claims 32 and 22, are incorporated herein.

32.   Regarding claim 35, the statements presented above, with respect to claims 32 and 23, are incorporated herein.

33.   Regarding claim 36, the statements presented above, with respect to claims 32 and 24, are incorporated herein.

34.   Regarding claim 38, the statements presented above, with respect to claims 32 and 29, are incorporated herein.

35.   Regarding claim 39, the statements presented above, with respect to claims 32 and 23, are incorporated herein.

36.   Regarding claim 40, the statements presented above, with respect to claims 32 and 24, are incorporated herein.

37.   Regarding claim 18, Taniguchi teaches all of the claimed limitations as stated

above, except that he does not explicitly disclose comparing said initial converted

intensity values (XYZ values in actual color space) and said adjusted converted

intensity values (XYZ values in virtual color space). However, Taniguchi does an

indirect comparison between the color conversion of XYZ to r'g'b' and from r'g'b' to RGB

in actual color space and the color conversion of XYZ to r'g'b' and from r'g'b' to RGB in

virtual color space (col. 9 lines 5-15, col. 15 lines 10-21). Therefore, it would have been

obvious to one of ordinary skill in the art at the time of present invention to compare the

initial converted intensity values and the adjusted converted intensity values as taught

by Taniguchi because this shows that the adjusted converted intensity values gives a

better resolution as the color conversion from XYZ to r'g'b' and from r'g'b' to RGB in

virtual color space prevents from losing the information regarding the desired color

which is lost by color conversion of XYZ to r'g'b' and from r'g'b' to RGB in actual color

space resulting in abnormal tone or a change in hue (col. 9 lines 5-15, col. 15 lines 10-

21).

38.   Regarding claim 19, Taniguchi teaches re-initializing said conversion operator

according to said adjusted conversion operator (col. 15 lines 4-9; XYZ to r'g'b'

conversion uses the matrix of equation 10 in virtual color space instead of using the

matrix of equation 1 in actual color space, which corresponds to re-initializing said

conversion operator according to said adjusted conversion operator).

39.   Regarding claim 20, Taniguchi teaches re-initializing said conversion operator

comprises substituting elements of said initial conversion operator with respective

values of said adjusted conversion operator (col. 15 lines 4-9; XYZ to r'g'b' conversion

uses the matrix of equation 10 in virtual color space instead of using the matrix of

equation 1 in actual color space, which corresponds to re-initializing said conversion

operator by replacing the elements of said initial conversion matrix in actual color space

with the elements of said adjusted conversion matrix in virtual color space).

40.   Regarding claim 21, Taniguchi discloses all of the claimed limitations as stated

above, expect that he does not explicitly teach to repeat said adjusting, said converting

based on said adjusted conversion operator, and said re-initializing, until a pre-

determined difference between said initial converted intensity values and said adjusted

converted intensity values is achieved. However, he describes to select vertexes R5,

G5 and B5 representing virtual chromaticity coordinates in virtual color space having the

same hues as those of the actual chromaticity coordinates of actual color space R0, G0

and B0, and converting the XYZ values to r'g'b' based on the relationship of color

conversion obtained for the virtual color monitor enabling the resulting r', g' and b' to be

within the color range of 0 to 1 of reproducible gamut in virtual color monitor (col. 10

lines 63-67, col. 11, col. 12 lines 1-51, col. 15 lines 10-21; though Taniguchi does not

teach to repeat the procedure but it would be possible to repeat the procedure by

selecting the vertexes with less than 5% higher saturations than those of the actual

chromaticity coordinates in actual color space, and gradually keep on selecting the

vertexes with higher saturations until they result in the chromaticity coordinates in virtual

color space that would produce the r'g'b' values in the range 0 to 1). Therefore, it would

have been obvious to one of ordinary skill in the art at the time of present invention to

repeat the procedure of Taniguchi to obtain the vertexes in virtual color space to

produce the r'g'b' values in the range of 0 to 1 because such procedure will ensure that

the very first vertexes in virtual color space with saturations higher than the vertexes of

actual chromaticity coordinates in actual color space are obtained as this will keep the

increase in the reproducible gamut range to minimum.

41.   Claims 4-5 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Taniguchi, in view of Chen and further in view of Childs et al. (GB 2,282,928 A;

hereinafter Childs).

42.   Regarding claim 4, the combination of Taniguchi and Chen disclose the claimed

limitations as stated above, except that they do not explicitly teach three or more

primary color components comprise four or more primary color components. However,

Childs teaches to use four or more display primaries (Fig. 3 shows two green primaries

besides red and blue). Therefore, it would have been obvious to one of ordinary skill in

the art at the time of present invention to use four or more display primaries as taught

by Childs into the method of Taniguchi and Chen because using four or more primaries

will provide a wider color gamut (pg. 1 paragraph 2).

43.   Regarding claim 5, the combination of Taniguchi and Chen disclose the

limitations as stated above, except that they do not explicitly teach adjusting comprises

adjusting the intensity value of said first primary color component based on intensity

values of one or more of said four or more primary color components. However, Childs

teaches to adjust the intensity values of a first primary color based on intensity values of

one or more primary colors (equation 3i, pg. 11; P1, P2, P3 and P4 corresponds to four or more primary color components). Therefore, it would have been obvious to one of ordinary skill in the art at the time of present invention to adjust intensity of a first primary color based on intensity values of all other primary colors as taught by Childs and use it into the method of Taniguchi and Chen because it results in simplifying some of the complexity of the decoder used for a four primary display device from a three primary transmission system (pg. 12 paragraph 3, pg. 15 lines 1-3).

44.   Regarding claim 33, the combination of Taniguchi and Chen disclose the limitations as stated above, except that they do not explicitly teach a driver to receive said adjusted intensity value from said color adjustment unit and to drive a color display device according to said adjusted intensity value. However, Childs teaches to determine display drive signals (driver to drive a color display device) from a coded transmission signal (adjusted intensity value) from a three primary transmission system (primary color components in color adjustment unit) (Fig. 4, pg. 12 paragraph 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time of present invention to drive the color display device as taught by Childs and use it into the method of Taniguchi and Chen because the gain control of each drive signal is used to set up the procedure for white balancing (pg. 12 last paragraph).

45.   Claims 17, 25, 37 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi, in view of Chen and further in view of Lin (US 6,160,644).

46.   Regarding claim 17, the combination of Taniguchi and Chen disclose the limitations as stated above, except that they do not explicitly teach using one or more look up tables (input LUT) to associate each of said converted values (scanned RGB values) with a set of device dependent XYZ values (XYZ values); and constructing said adjusted direct conversion matrix (input LUT comprising table entries is used as a direct conversion matrix) using said XYZ values. However, Lin teaches exactly the same (col. 3 lines 1-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time of present invention to use look up tables for converting scanned RGB values into device-dependent XYZ values as taught by Lin and use it into the method of Taniguchi and Chen because look up tables helps transformation of output device in-gamut colors using interpolation (col. 3 lines 31-33).

47.   Regarding claim 25, the statements presented above, with respect to claims 22 and 17, are incorporated herein.

48.   Regarding claim 37, the combination of Taniguchi and Chen disclose the limitations as stated above, except that they do not explicitly teach said logic unit comprises one or more memory units to store one or more look up tables to associate each of said one or more imaginary intensity values with a respective plurality of said device values. However, Lin teaches to use only enough memory to store one transformation LUT (col. 15 lines 1-4; please refer to rejection of claim 17 for further arguments). Therefore, it would have been obvious for one of ordinary skill in art at the time of present invention to store only one transformation lookup tables in memory as taught by Lin and use it into the method of Taniguchi and Chen because storing only

one transformation LUT in memory will save considerable memory otherwise required to store the transformation LUT for each input device (col. 14 lines 29-32, col. 15 lines 3-4).

49.   Regarding claim 41, the statements presented above, with respect to claims 38 and 37, are incorporated herein.

50.   Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi, in view of Chen, and further in view of Tanner et al. (US 6,496,160 B1; hereinafter referred to as Tanner).

51.   Regarding claim 14, the combination of Taniguchi and Chen disclose the limitations as stated above, except that they do not explicitly teach said initial intensity values (intensity of a given pixel) are selected according to intensity values of primary color components of a neighbor pixel adjacent (adjacent pixels) to said pixel. However, Tanner teaches to calculate the intensity of a given pixel from adjacent pixels (col. 4 lines 12-14). Therefore, it would have been obvious to one of ordinary skill in the art at the time of present invention to calculate the intensity of a given pixel as taught by Tanner and use it into the method of Taniguchi and Chen because this results in smoother appearing lines and edges of objects to be displayed on the raster display unit (col. 4 lines 14-15).

52.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to JWALANT AMIN whose telephone number is (571)272-

2455. The examiner can normally be reached on 10:30 a.m. - 7:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kee Tung can be reached on 571-272-7794. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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/J. A./
Examiner, Art Unit 2628

/Kee M Tung/
Supervisory Patent Examiner, Art Unit 2628